

NOTES ON THE LEPTURINAE (COLEOPTERA, CERAMBYCIDAE)

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The subfamily Lepturinae is a very dominantly holarctic group, with a large proportion of its one thousand-odd species occurring in the temperate parts of North America, Asia and Europe. The group is also well represented in Madagascar by many endemic genera. Relatively few species have been described from the tropical parts of Africa, Asia and the Americas, and almost none from the Australasian Region. With the group centered as it is in the Holarctic Region, it is to be expected that many genera, and even some species, should be possessed in common by the Palearctic and Nearctic subdivisions¹. Examples of species already known to have holarctic distribution are *Stenocorus inquisitor*, *Pachyta lamed*, *Acmaeops pratensis*, *Anoploclera rubra* and *A. scymaculata*.

The Lepturinae undoubtedly merits subfamily rank, but some of its components merge with the subfamilies Prioninae, Aseminae and Cerambycinae through a series of links. For instance, the tribe Philini has been placed in both the Prioninae and the Lepturinae, and its status is still debated². The Necydalini has been considered as a link between the Lepturinae and the Cerambycinae. Aurivillius, and others preceding him, preferred to treat the lepturids as a tribe of the subfamily Cerambycinae, but Craighead showed that on the basis of larval characters this group as well as the Aseminae must be treated as subfamilies.

The species of the subfamily are dominantly borers in conifers, and for that reason undoubtedly had the best opportunity to migrate freely between Asia and North America during the latter part of the last period of connection between the two continents, when the land bridge was covered with coniferous forests. A large part of the subfamily seems to represent an actively evolving or "plastic" group. Tribal and generic boundaries are difficult to recognize, and the divisions must be somewhat arbitrary and artificial.

¹In discussing a conspicuously northern group such as this, the divisions Palearctica and Nearctica are almost superfluous, or are to be considered as convenient groupings of subregions. Moreover, the species in Eastern Siberia and Alaska, for instance, may be more closely related than those in the Manchurian and Central Asiatic Subregions. In many other groups of different historico-geographical development, the terms Palearctica and Nearctica are applicable, as in the subfamilies Hispinae and Cassidinae of the Chrysomelidae, where the palearctic and nearctic elements have little in common.

²See Gressitt, 1940. Phil. Journ. Sci. 72: 13.

In attempting to arrive at the correct generic determinations of the Chinese Lepturinae, a number of changes have been found necessary, involving both Old and New World nomenclature. Some of these changes are set forth below, with the addition of some notes on certain Japanese species.

1. *Microrhabdium* Kraatz, 1879, is a synonym of *Encyclops* Newman, 1838. *Microrhabdium jozancensis* Matsushita, 1933, is a synonym of *Encyclops olivacea* Bates, 1884 (Japan). The type of *Microrhabdium* is *Encyclops macilentus* (Kraatz), 1879, new combination (Siberia). The eyes of *Microrhabdium* have been incorrectly stated to be coarsely faceted, following Bates' assumption, arrived at by inference only. The beetle figured in the Genera Insectorum (Boppe, pars 178, 1921) pl. 6, fig. 10 as *Encyclops olivacea* Bates is actually the green phase of *Encyclops cocculca* LeConte (W. North America).

2. *Leptorhabdium ornatum* (LeConte), new combination. *Xylosteus ornatus* Lec., 1873 (California) must be transferred to *Leptorhabdium* Kraatz, 1879. It is very similar in appearance to the type of the latter: *illyricum* Kraatz (Berl. Ent. Zeits. 14 (1870) 415, pl. 3, fig. 6a (*Xylosteus illyricus*; SE. Europe). The latter illustration is labelled *Xylosteus spinolae*, male, from Illyria, but in the text above the explanation, the name *illyricus* is proposed for what was thought to be the male of *spinolae*. The "female", fig. 6c, is correctly labelled *Xylosteus spinolae*. The principal character separating *Leptorhabdium* from *Xylosteus* is the insertion of the antennae in the former close to the anterior margin of the eyes, and in the latter on tubercles situated far anterior to the eyes.

3. *Torotinus* Bates, 1884, (type: *T. longicornis* B., 1884 = *Torotus minutus* var. *reini* Heyden, 1879) is at best a subgenus of *Torotus* Dejean, 1821.

4. *Orymirus* Mulsant, 1863, (type: *Cerambyx cursor* Linn., 1758) is no more than a weak subgenus of *Torotus*.

5. *Apatophysis* Chevrolat, 1860, should probably be considered a subgenus of *Centrodera* LeConte, 1850. The former is distributed in central Asia and the latter in North America.

6. *Sachalinobia koltzei* Heyden. This species may be newly recorded from Honshu (Japan): two specimens [one in the California Academy of Sciences (Gressitt collection)] collected at Inamachi, Nagano Prefecture, central Honshu, May 23, 1931, O. Yoshie, collector.

7. *Acmacops viridula* Matsumura appears to be a valid species, though it has been synonymized with *A. smaragdula* Fabr. The former is narrower, with the prothorax almost carinate medially.

8. *Gaurotes doris* Bates, 1884 (Japan) should be relegated to a subspecies of *G. ussuriensis* Blesig, 1873 (Siberia).

9. The genus *Anoplodera* was established by Mulsant in 1840 for the European species *Leptura serguttata* Fabricius. However, the genus has hardly been used by European or Japanese workers. The species have been generally retained in the genus *Leptura* Linnaeus. The following Japanese species, among others, should be placed in *Anoplodera*: *granulata* Bates, *succedanea* Lewis, *varicornis* Dalman and *virens* Linn.

10. *Leptura succedanea* Lewis (Japan) should become *Anoplodera rubra succedanea* (Lewis) new combination.

11. Many species congeneric with *Leptura quadrifasciata* Linn., the type of *Leptura*, have long been placed in *Strangalia*. Some Japanese and Formosan species in this category are: *athhiops* Poda, *auratopilosa* Matsushita, *duodecimguttata* Fabr., *horishana* Matsushita, *maindroni* Pic, *ochraceofasciata* Bates, *regalis* Bates, *tattakana* Kano and *thoracica* Creutzer.

12. *Leptura vicaria* Bates, 1884, of Japan, is a subspecies of *L. obliterata* Haldeman, 1847, of W. North America, and is almost identical with *L. obliterata soror* LeConte. It thus becomes *Leptura obliterata vicaria* Bates. Actually *soror* (or *vicaria*) appears to be the ancestral form, and *obliterata* a dark coastal off shoot of the former, merging with the ancestral stock in British Columbia. *L. deleta* LeConte is an isolated offshoot in E. North America, but is also closely related to the ancestral stock of the complex.

13. The variety of intergrading characters possessed by many East Asian species placed in *Strangalia* Serville, including those described in *Strangalina* Aurivillius, suggest that *Neobellamira* Swaine and Hopping, *Ophistomis* Thomson and possibly *Bellamira* Leconte, may not deserve full generic status, and also that some or all of them are represented in East Asia. The filling in of gaps between recognized genera with the discovery of additional species renders the delimiting of supraspecific categories in Lepturinae more and more difficult. Many generic names now in use must undoubtedly be relegated to subgeneric status, or synonymized.

ERRATUM

The following correction should be made in Vol. 49 (6): 149, 1947, seventh line from end of article by Austin H. Clark:

ARGYNNIDAE Subfamilies LIMENITINAE (with tribes Euthaliidi and Limenitidi), ARGYNNINAE (with tribes Cynthiidi and Argynniidi), HELICONIINAE (with tribes Heliconiidi, Dionidi and Cethosiidi).